

Important ornithological records from Minas Gerais state, Brazil

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Minas Gerais state, in south-east Brazil, harbours a rich avifauna of almost 800 species (Mattos *et al.* 1993). Such high species richness is a result of the region's complex vegetation, as the state possesses Atlantic Forest, *Cerrado*, *Caatinga*, and transitional zones between these biomes. It is also one of the most mountainous areas of the country, with two main ranges: the Serra do Espinhaço and Serra da Mantiqueira, atop which can be found typical vegetation known, respectively, as rupestrian fields (*campos rupestres*) and high-altitude grasslands (*campos de altitude*). (Other habitat terms have been described in earlier papers, particularly Kirwan *et al.* 2001, 2004, to which readers are referred for further details.) Recently, new data concerning range extensions and noteworthy records for birds in Minas Gerais have been presented by several authors (e.g. Willis & Oniki 1991, Parrini & Pacheco 1997, Cordeiro *et al.* 1998, Machado *et al.* 1998, Melo Júnior *et al.* 1998, Silveira 1998, Vasconcelos & Lins 1998, D'Angelo Neto 2000, D'Angelo Neto & Queiroz 2001, D'Angelo Neto *et al.* 2001, Kirwan *et al.* 2001, 2004, Ribon & Maldonado-Coelho 2001, Raposo *et al.* 2002, Ribon *et al.* 2002, Vasconcelos *et al.* 2002a,b, 2003a,b, 2004, D'Angelo Neto & Vasconcelos 2003, 2004, Marini *et al.* 2003, Rodrigues & Gomes 2004, Vasconcelos & Silva 2004). Here, we present further new data on the distribution and, occasionally, for particularly poorly known birds, behaviour of 42 bird species in Minas Gerais, of which at least three are certainly new for the state and several are globally threatened (BirdLife International 2004).

Methods

Field records were obtained from the following principal study localities in Minas Gerais:

Serra da Canastra National Park (20°15'S, 46°40'W), São Roque de Minas municipality: a protected area covering c.200,000 ha with *cerrado*, *campo rupestre*, gallery forests and marshes (elevation 900–1,450 m).

Fazenda Jacaré-Riachão (18°39'S, 45°02'W), Felixlândia municipality: a *Eucalyptus* plantation that also comprises natural areas of *cerrado*, *campo cerrado*, *vereda* (palm groves in swampy areas), and gallery forests.

Ilha do Boi (18°31'S, 45°29'W), Três Marias municipality: a small island in Três Marias dam lake in the rio São Francisco, with *cerrado* vegetation (elevation c.580 m).

- Chapada, Parque Estadual do Rio Preto** (18°14'S, 43°19'W), São Gonçalo do Rio Preto municipality: a high-altitude area (elevation 1,500–1,750 m) located within a state park. Chapada comprises *campos rupestres*, open grasslands, marshes and patches of montane forest.
- Mata do Isidoro** (18°10'S, 43°17'W), Felício dos Santos municipality: a semi-deciduous montane forest with patches of rupestrian savanna (*cerrado rupestre*) and *campos rupestres* (elevation 800–1,300 m).
- Mendanha** (18°06'S, 43°30'W), Diamantina municipality: a patch of secondary semi-deciduous forest in the surroundings of the village of Mendanha.
- Santa Joana** (18°02'S, 42°50'W), Itamarandiba municipality: fragments of secondary semi-deciduous forests.
- Rio Santa Catarina** (17°59'S, 46°49'W), Vazante municipality: a tributary of the rio Paracatu, which flows to the middle rio São Francisco. Field work was conducted in a patch of gallery forest along this river.
- Fazenda Campo Alegre** (17°54'S, 46°02'W), João Pinheiro municipality: a *Eucalyptus* plantation of c.8,000 ha surrounded by natural areas of *cerrado*, *campo cerrado*, *vereda*, and gallery forests (elevation c.530 m).
- Serra do Cabral** (17°35'S, 44°27'W), Joaquim Felício municipality: a mosaic of *campos rupestres*, *cerrado* and gallery forests.
- Fazenda Bom Sucesso** (17°35'S, 46°36'W), Vazante municipality: a large area of c.30,000 ha of *cerrado*, gallery forests and some *veredas* along the rio Escuro, on the left bank of the rio Paracatu (elevation c.540 m).
- Campo Limpo** (17°12'S, 42°51'W), Turmalina municipality: a patch of secondary semi-deciduous montane forest located at Chapada de São Domingos, a plateau between the rio Jequitinhonha and rio Araçuai (elevation c.850 m).
- Fazenda do Senhor Onofre Sandinha** (17°08'S, 42°44'W), Leme do Prado municipality: a large fragment of semi-deciduous montane forest adjacent to the Estação Ecológica de Acauã, also located in the Chapada de São Domingos (elevation c.800 m).
- Fazenda Brejão** (17°00'S, 45°54'W), Brasilândia municipality: a large area of c.35,000 ha of *cerrado*, gallery forests and *veredas*, on the left bank of the rio Paracatu (elevation c.450 m).
- Catutiba** (16°49'S, 42°38'W), José Gonçalves de Minas municipality: a small fragment of semi-deciduous montane forest at Chapada de São Domingos (elevation c.800 m).
- Mata do Lobo** (16°47'S, 43°01'W), Botumirim municipality: a large fragment of semi-deciduous forest on the east slope of the central Espinhaço range (elevation 700–800 m).
- Fazenda São Miguel** (16°43'S, 42°41'W), Cristália municipality: a 5-ha fragment of semi-deciduous forest (elevation c.500 m).
- Sítio Duboca** (16°43'S, 43°53'W), Montes Claros municipality: a limestone outcrop with dry forests and gallery forests in deep valleys (*grotas*), located in the surroundings of the town of Montes Claros.

- Rio do Cedro** (16°40'S, 43°54'W), Montes Claros municipality: a patch of gallery forest along the rio do Cedro surrounded by dry forests on limestone outcrops.
- Porto Mandacaru** (16°41'S, 42°30'W), Grão Mogol municipality: an area of scrub and secondary *caatinga* woodland located on the left bank of the rio Jequitinhonha.
- Ribeirão Congonhas** (16°41'S, 43°19'W), Grão Mogol municipality: a mosaic of *cerrado*, gallery forests and semi-deciduous forests.
- Santa Marta** (16°37'S, 43°18'W), Grão Mogol municipality: areas of *cerrado* and gallery forests.
- Fazenda Maria das Neves** (16°36'S, 42°49'W), Grão Mogol municipality: a small patch of semi-deciduous forest on the left bank of the rio Itacambiruçu.
- Fazenda Travessia** (16°34'S, 43°32'W), Francisco Sá municipality: fragments of arboreal *caatinga* interspersed with pastures.
- Sítio Recanto** (16°33'S, 43°24'W), Grão Mogol municipality: an area of typical *cerrado*, *cerrado rupestre*, *campo rupestre* and riparian forests (elevation 950–1,000 m).
- Francisco Sá** (16°28'S, 43°30'S), Francisco Sá municipality: urban area and adjacent *caatinga* woodland (elevation c.660 m).
- Chapada do Catuni** (16°27'S, 43°24'W), Francisco Sá and Grão Mogol municipalities: a sector of the Espinhaço range that represents a watershed between the hydrographical basins of the rios São Francisco and Jequitinhonha (elevation 950–1,100 m). The site is located on the same plateau as Sítio Recanto. Typical vegetation is *cerrado* and *cerrado rupestre*.
- Fazenda Imburana** (16°23'S, 43°24'W), Francisco Sá municipality: a large fragment of arboreal *caatinga* on the west slope of the Chapada do Catuni (elevation 650–900 m).
- Fazenda Baixa da Lasca** (16°22'S, 43°33'W), Francisco Sá municipality: small- to medium-sized fragments of arboreal *caatinga* and pastures (elevation c.660 m).
- Rio Bananal** (16°10'S, 42°17'W), Salinas municipality: pastures and *caatinga* scrub in the surroundings of the city of Salinas.
- Fazenda Suçupara** (16°07'S, 44°09'W), Patis municipality: a small patch of damp forest surrounded by pastures and coffee plantations.
- Campus Avançado de Janaúba** (15°49'S, 43°16'W), Janaúba municipality: an area of arboreal *caatinga* and *caatinga* scrub, traversed by the rio Gorutuba.

Coordinates for a number of other localities mentioned in the text are largely taken from Paynter & Traylor (1991), supplemented through reference to an online database (www.nima.mil/gns/html/cntry_files.html). Bird species were identified using binoculars, telescopes and by their vocalisations. Tape-recordings were made with Sony TCM-5000 EV and Marantz PMD201 tape-recorders and Sennheiser ME-66 microphones. Copies of vocalisations have been deposited at the Arquivo Sonoro Prof. Elias Coelho (ASEC), Departamento de Zoologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro. Specimens were collected using mist-nets

and shotguns. Specimens are deposited at the Coleção Ornitológica do Departamento de Zoologia da Universidade Federal de Minas Gerais (DZUFMG) in Belo Horizonte, Minas Gerais, at the Museu de História Natural de Taubaté (MHNT), Taubaté, São Paulo, and at the Museu de Zoologia da Universidade de São Paulo (MZUSP), São Paulo. Some specimens were compared to those already housed at DZUFMG and MZUSP. Systematic order and nomenclature follow those of the Brazilian Ornithological Records Committee (Comitê Brasileiro de Registros Ornitológicos 2005), with any departures from this explained in the species accounts.

Species accounts

BLACK-AND-WHITE HAWK-EAGLE *Spizaetus melanoleucus*

An adult was observed at close quarters for several minutes close to the entrance of Parque Nacional Cavernas do Peruaçu, on 7 September 2005 (GMK, R. Schaefer; for a description of this locality see Kirwan *et al.* 2004). This is one of the very few records of this generally uncommon species from Minas Gerais, and is from a locality where both Ornate Hawk-eagle *Spizaetus ornatus* and Black Hawk-eagle *S. tyrannus* are also known (Kirwan *et al.* 2001, 2004). We follow Helbig *et al.* (2005) in subsuming the genus *Spizastur*, which is usually reserved for this species, within *Spizaetus*.

WHITE-BROWED GUAN *Penelope jacucaca*

Previously known from just two localities in Minas Gerais (Kirwan *et al.* 2001, 2004), GMK & T. Feild observed one in low *caatinga* woodland 15 km west of Lagoa dos Patos (16°97'S, 44°57'W), on 27 October 2004, which becomes the southernmost available locality for this generally uncommon species that is currently classed as Vulnerable (BirdLife International 2004).

OCELLATED CRAKE *Micropygia schomburgkii*

D. Buzzetti *in* Mazar Barnett & Kirwan (1999) tape-recorded this species in Serra da Canastra National Park, in February 1999. GMK has two further records of singing birds in the same national park, close to the area where it was first noted by Buzzetti: on 1 November 2000 and 23 October 2004, on both occasions in relatively close proximity to recently burnt areas (habitat also favoured by other rare species such as Campo Miner *Geositta poeciloptera* [see below] and Ochre-breasted Pipit *Anthus nattereri*). Although mapped for much of the southern part of Brazil by Taylor & van Perlo (1998), available localities for this rare species are, in fact, rather few (BirdLife International 2004), and in some areas within this region *M. schomburgkii* appears to have declined to the point of extinction (Willis 2004; GMK pers. obs.), making the presence of a possibly regular population within the confines of a protected area of some conservation significance. Of interest in this respect is that A. Whittaker, B. Carlos & K. J. Zimmer recorded this crane daily, with high

single-day counts of 10+ at Emas National Park, Goiás, in late-October 2005, suggesting that Emas represents another important stronghold for the species. Currently classified as Least Concern (BirdLife International 2004).

RUFIOUS-FACED CRAKE *Laterallus xenopterus*

This poorly known South American crane possesses very few localities (Taylor & van Perlo 1998) with only three records in Brazil: a specimen from Brasília National Park, Distrito Federal, deposited in the Museu Nacional do Rio de Janeiro (MNRJ 32661), sight records in Roncador Biological Reserve and Brasília Zoological Garden, Distrito Federal, and a road-killed bird found at Itirapina, São Paulo, from which locality other records of *Laterallus* cranes plausibly refer to this species (Myers & Hansen 1980, Negret & Teixeira 1984, Collar *et al.* 1992, Oniki & Willis 1996, Sick 1997, Willis & Oniki 2003, Willis 2004). On 24 July 2004 a predominantly brownish-black crane with a whitish belly and dark brown-banded body-sides was captured by MFV and Bárbara Maria in a small-mammal trap set in dense grassland surrounding a *vereda* at Fazenda Jacaré-Riachão. Photographs of this specimen (DZUFMG 4535) were sent to Drs Storrs L. Olson and Barry Taylor who concluded that it was a juvenile *L. xenopterus* based on the following characters: a small crane with a well-developed tail and bill shape and proportions that agree with the genus *Laterallus*; rufous feathers of the incoming adult plumage on the head- and neck-sides; buffy-cream feathers appearing on the lower throat and upper breast (eliminating *L. leucopyrrhus* which has white underparts); and white barring appearing on the upperwing surface. The undertail-coverts are black centrally and banded black and white laterally, thereby recalling the descriptions of *L. xenopterus* by Lowen *et al.* (1996) and Brace *et al.* (1998), but differing from other reports, which mention the vent as being entirely black (Myers & Hansen 1980, Storer 1981). According to BT (pers. comm. 2005), the present bird was in post-natal plumage, as other *Laterallus* are known to present a dark, plain first plumage. An illustrated and more detailed description of this juvenile is in preparation and will be presented elsewhere. This is the first record of *L. xenopterus* in Minas Gerais (see Mattos *et al.* 1993), extending the species' range c.460 km to the north-east from Itirapina and c.400 km to the south-east from the Distrito Federal.

AZURE GALLINULE *Porphyrio flavirostris*

Remsen & Parker (1990) mentioned two specimens from Minas Gerais, taken at Lagoa Santa, near Belo Horizonte, in September 1839 and April 1866, but we have seen no other published state records. GMK *et al.* observed a single adult at a heavily reed-fringed freshwater lake, with much emergent and floating vegetation, and set in agricultural fields, c.30 km north of Piumhi (town centred on 20°28'S, 45°58'W), in western Minas Gerais, on 21 October 2004, closely according with the period predicted by Remsen & Parker (1990) as being most likely to produce sightings beyond the species' usual range.

PEARLY-BREASTED CUCKOO *Coccyzus euleri*

Despite its wide range, this is a rare and little-known cuckoo (Hilty & Brown 1986, Sick 1997). On 15–16 November 2002, one was observed by MFV and SDN at Fazenda do Senhor Onofre Sandinha. On 18 December 2004 another individual was observed and tape-recorded at Fazenda Travessia.

PLAIN-TAILED NIGHTHAWK *Nyctiprogne vielliardi*

A lone individual of this recently described species (Lencioni-Neto 1994) was observed by MFV in flight over the rio Gorutuba, Campus Avançado de Janaúba, at dusk, on 11 April 2002. All known records for this species are from the rio São Francisco Valley (Lencioni-Neto 1994, Kirwan *et al.* 2001, 2004, Whitney *et al.* 2003, Cleere 2004). This record extends the species' range c.50 km to the east.

BROAD-TIPPED HERMIT *Anopetia gounellei*

Recently recorded in Minas Gerais by Parrini & Pacheco (1997) in Janaúba municipality. At least three individuals were observed by MFV and SDN in an area of arboreal *caatinga* at Fazenda Imburana on 18 February 2001, 31 March 2002 and 2 September 2002. Two plant species of the Acanthaceae family were observed being visited by this hermit. These are the southernmost records for the species (Parrini & Pacheco 1997, Sick 1997, Hinkelmann 1999). On 23 September 2002, a male (DZUFMG 3520) was collected by MFV in *caatinga* woodland at Campus Avançado de Janaúba whilst visiting flowers of an arboreal species of *Capparis* (Capparaceae). Broad-tipped Hermit is very rare in scientific collections (Hinkelmann 1999), and this appears to represent the first known specimen for Minas Gerais.

SOMBRE HUMMINGBIRD *Aphantochroa cirrochloris*

Several were observed and photographed by SDN in riparian forest at Sítio Duboca, during visits to the area in 2000. Although considered as being endemic to the Atlantic Forest (e.g. Stotz *et al.* 1996), its range also reaches interior Brazil (Sick 1997, Züchner 1999). That our records were made in the transition between *Caatinga* and *Cerrado* reinforces that this species cannot be considered an endemic to the Atlantic Forest. Indeed, *A. cirrochloris* has long been known from the state of Goiás (Pinto 1936) and its presence has also been registered recently at the Estação Ecológica de Águas Emendadas, Distrito Federal (Lopes *et al.* 2005), further emphasising the species' more widespread distribution and habitat preferences.

BLUE-TUFTED STARHROAT *Helimaster furcifer*

In Minas Gerais known from only a specimen taken by Natterer at São Domingos (Pelzeln 1871, Pacheco 1998) and from three areas without precise details, namely around Paracatu, Triângulo Mineiro and Serra Negra (Mattos *et al.* 1991a,b). On 7 July 2003 an adult male was observed by SDN visiting flowers of a species of *Calliandra* (Leguminosae) in the city of Francisco Sá. On 9–10 August 2003, a male

was photographed visiting a hummingbird feeder in the same place. This appears to be the second documented record of Blue-tufted Starthroat in Minas Gerais.

CHECKERED WOODPECKER *Picooides mixtus*

This little-known woodpecker has recently been found far to the north of its previously known range (Silveira *et al.* 2001, Beadle *et al.* 2004). It is rare in scientific collections (Silveira *et al.* 2001). On 28 May 1994, MGD observed a male feeding on termites in a *cerrado* area at Ilha do Boi. A female was also observed by MGD, on 19 February 1997, at a gallery forest border beside Rolinho stream, near 'Rancho de Pedra', in Serra da Canastra National Park. This appears to be the only published record for this protected area (Silveira 1998). A male was observed in very heavily degraded *cerrado* near the rio das Velhas, south of Pirapora, on 12 February 2002 (GMK), the only record from this area despite reasonably regular visits during most months of the year. On 29 October 2002, a pair was collected by MFV and SDN in *cerrado* at Sítio Recanto (DZUFMG 3526–3527), being initially attracted by imitating the song of Ferruginous Pygmy-owl *Glaucidium brasilianum*. On 11 November 2002, an additional female was taken by MFV and SDN (MHNT 4556) in *cerrado rupestre* at the same site. The most regular locality for *P. mixtus* in Minas Gerais appears to be the *cerrados* below the Serra do Cipó (pers. obs., K. J. Zimmer & A. Whittaker pers. obs.).

GIANT ANTSHRIKE *Batara cinerea*

Nominate *cinerea* is known from the forests of south-east Brazil, from southern Espírito Santo to northern Rio Grande do Sul, and adjacent north-east Argentina (Ridgely & Tudor 1994, Zimmer & Isler 2003). The northernmost records are from Itacolomi, Minas Gerais (Andrade 1998), Santa Teresa, Espírito Santo (Simon 2000, Willis & Oniki 2002), and the Serra do Caraça, Minas Gerais (Vasconcelos *et al.* 2003c). On 19 May 2004, a male was tape-recorded and collected by MRB, MFV and SDN in *cerrado rupestre* (elevation 965 m) at Mata do Isidoro. The specimen (DZUFMG 4166) was compared to another male (DZUFMG 904) taken on 29 July 1971 at Salesópolis, São Paulo, by E. Dente. No variation in plumage was observed, confirming the new specimen as being also referable to nominate *cinerea*. This record extends the subspecies' range c.225 km to the north.

CAATINGA ANTWREN *Herpsilochmus sellowi*

We found this recently described species common in several *caatinga* woodlands and semi-deciduous forests in northern Minas Gerais. Specimens were collected by MFV and SDN at Fazenda Imburana (DZUFMG 3375–3377) on 31 March 2002 and at Fazenda Maria das Neves (DZUFMG 3839) on 7 May 2003. These are the southernmost records for this species (Whitney *et al.* 2000, Kirwan *et al.* 2001, Zimmer & Isler 2003).

NARROW-BILLED ANTWRN *Formicivora itheringi*

Recent records of this Brazilian endemic and globally threatened species have extended its previously known range to the south-west (D'Angelo Neto *et al.* 2001, D'Angelo Neto & Vasconcelos 2004). On 21 May 2004 SDN, MRB and MFV heard the species' typical call in a semi-deciduous forest at Mendanha, thereby extending its range c.115 km to the south. On 30 July 2004, JFS observed a male at Fazenda São Miguel within a mixed-species flock containing Planalto Slaty-antshrike *Thamnophilus pelzelni*, Black-capped Antwren *Herpsilochmus atricapillus*, Tropical Gnatcatcher *Polioptila plumbea* and Golden-crowned Warbler *Basileuterus culicivorus*. Additional specimens were obtained by MFV at Fazenda do Senhor Onofre Sandinha (DZUFMG 4018–4019, MHNT 4557), Campo Limpo (DZUFMG 3873) and Catutiba (DZUFMG 3865).

WHITE-SHOULDERED FIRE-EYE *Pyriglena leucoptera*

A typical and widespread species of the Atlantic Forest of south-east Brazil and adjacent eastern Paraguay and north-east Argentina (Ridgely & Tudor 1994, Sick 1997, Zimmer & Isler 2003). On 3 July 2003 a male was tape-recorded by MFV in a gallery forest along the rio Santa Catarina. Next day, it was tape-recorded and attracted to playback at the same site. This is the second locality for White-shouldered Fire-eye in the *Cerrado*, the first being Lagoa Santa, Minas Gerais (Reinhardt 1870, Silva 1995, Christiansen & Pitter 1997). Nevertheless, Lagoa Santa is located in the transition zone between the *Cerrado* and Atlantic Forest (see Christiansen & Pitter 1997), whereas the present record is from within the *Cerrado* proper and extends the species' range to interior Brazil. The dispersal of many Atlantic Forest taxa, including birds, into the *Cerrado* is purported to occur via gallery forests (Redford & Fonseca 1986, Vielliard 1990, Silva 1996, Oliveira-Filho & Ratter 1995, 2000, Silva & Vielliard 2000), which hypothesis might also explain the occurrence of White-shouldered Fire-eye in north-west Minas Gerais. The species occurs in small gallery forests surrounded by *cerrado* near Serra da Canastra National Park (GMK pers. obs., A. Whittaker & K. J. Zimmer pers. obs.).

WHITE-BROWED ANTPITTA *Hyllopezus ochroleucus*

Common in the *Caatinga* and semi-deciduous forests of northern Minas Gerais. Specimens were obtained by MFV and SDN from Fazenda Baixa da Lasca (DZUFMG 2776, 3439, MHNT 4486), Mata do Lobo (DZUFMG 3324) and Fazenda Maria das Neves (DZUFMG 3840). These are the southernmost known records of the species (Ridgely & Tudor 1994, Whitney *et al.* 1995, Kirwan *et al.* 2001, Krabbe & Schulenberg 2003).

CRYPTIC ANTTHRUSH *Chamaeza meruloides*

On 25 February 2005, one was tape-recorded by SDN in a forest fragment at Santa Joana. This appears to be the most interior record of this Atlantic Forest endemic in Minas Gerais state (Ridgely & Tudor 1994, Krabbe & Schulenberg 2003).

CAMPO MINER *Geositta poeciloptera*

Our available knowledge of this rather poorly known and possibly at risk species was most recently summarised by Remsen (2003). During regular visits to Serra da Canastra National Park since 1995, GMK has not infrequently found this species, most usually in October. *Geositta poeciloptera* is often abundant there, if present at all. Available breeding data for this taxon are very few, with three nests, all in September, being the only published data (Remsen 2003). GMK has observed the species in display-flights on many occasions in October, and in October 2004 even observed a bird apparently holding territory in agricultural grassy areas surrounding a tiny patch (just a few square metres) of modified *campo*, beside the road to São Roque de Minas (20°20'S, 46°23'W). Given that Remsen (2003) postulated that agriculturalisation posed a long-term threat to the species, the latter observation is potentially significant. We have also frequently noted the species' apparently strong attachment to very recently burnt areas, as has been well documented in the literature, and we have watched birds unconcernedly continue to feed as little as few metres from observers (although the species can also be very wary), 'hammering' and digging in the ground for food, extracting up to c.5 cm-long larvae from the scorched earth, and continually making short, rapid, but certainly not furtive movements. Once they commence to regenerate, such recently burnt areas are rich in herbivorous insects, particularly grasshoppers. A. Whittaker & K. J. Zimmer (pers. obs.) noted that flush counts of grasshoppers at such sites in Canastra, in September 2001, were remarkably high, and birds at the burns, including Campo Miners, seemed to concentrating on the temporarily most abundant prey. Whereas both White-rumped *Xolmis velatus* and Grey Monjitas *X. cinereus* pounced on grasshoppers from above, the miners flutter-pursued grasshoppers that they flushed from the ground. Apparently, when conditions are optimal at regenerating burns, the resulting flush of insects provides a super resource for any insectivorous bird whose physiology and breeding system permits them to be sufficiently opportunistic to exploit such ephemeral conditions. Occasionally, Campo Miner may tread the same tiny area of ground rapidly for a few seconds, as if trying to disturb potential prey, although they were not noted to feed directly as a result of such activity. Birds also reach up, stretching the neck to the full extent, to extract small insects from grasses and plants, and also inspecting seedheads in this way. Such behaviour is somewhat reminiscent of that in some Old World pipits and wagtails. Whilst feeding, *G. poeciloptera* continually bobs the rear part of the body and tail, the latter actually just touching the ground during c.30% of such movements.

CHOTOY SPINETAIL *Schoeniophylax phryganophilus*

The subspecies *S. p. petersi* is known from along the rio São Francisco Valley, between northern Minas Gerais and central Bahia (Willis & Oniki 1991, Ridgely & Tudor 1994, Kirwan *et al.* 2001, 2004, Remsen 2003). Nevertheless, its validity requires confirmation (see discussion in Remsen 2003 and Kirwan *et al.* 2004) and will be the subject of a future communication (Vasconcelos & Kirwan in prep.).

Specimens were collected by MFV and SDN at Fazenda Baixa da Lasca (DZUFMG 2842–2844, MHNT 4411) and around the town of Francisco Sá (DZUFMG 3967–3968) in 2000–03, extending the species' range to the west slope of the Espinhaço range. Furthermore, SDN and MFV observed the species in degraded *caatinga* at Porto Mandacaru on 3 July 2001 and at the rio Bananal, on 17 December 2002, extending the range *c.*150 km to the east and constituting the first records in the rio Jequitinhonha Valley. Additional specimens were also obtained by MFV and JFS at Fazenda Jacaré-Riachão (DZUFMG 4202–4205), on 9–10 April 2004. These records extend, by *c.*100 km, the subspecies' range to the south, as the southernmost limit was previously considered to lie between Várzea da Palma and Lassance (Kirwan *et al.* 2004). MGD observed this species in degraded *cerrado* at Fazenda Brejão, in January 1991, 1992 and 1933. On 8 November 1995, he also observed one at the border of a gallery forest near a *vereda* at Fazenda Campo Alegre. These appear to be the westernmost records for the taxon. Other new localities, within the previously known range for the species, include wet grassland beside the rio São Francisco in Pirapora town (17°21'S, 44°56'W), Fazenda Nossa Senhora de Aparecida, Itacarambi (15°05'S, 44°07'W; see Kirwan *et al.* 2001) and the rio das Velhas, south of Pirapora (all GMK).

CINEREOUS-BREASTED SPINETAIL *Synallaxis hypospodia*

Very poorly known in Minas Gerais, where Remsen (2003) mapped it for the north-west of the state, in the São Francisco Valley. We have never found the species there (despite numerous visits) and, indeed, the only documentary evidence of its occurrence there (and the entire state) appears to be those specimens held in MNRJ taken at Brejo Januária, by Sneath in 1926 (MNRJ 15704, 15706). It was thus rather surprising to discover a pair of the species in dense second-growth bordering a damp *brejo* near Cristiano Otoni (20°83'S, 43°80'W), *c.*100 km south of Belo Horizonte, on 24 August 2004 (GMK *et al.*). The identification was based on the following features in combination: pale rufous crown not quite extending to forehead, pale rufous wing-coverts, long, slightly graduated dull brown tail with no hint of reddish brown, rather pale chin and throat, with traces of dark (blackish) confined to the lower throat, and otherwise well-saturated grey underparts and face, including ear-coverts and lores. Sooty-fronted Spinetail *S. frontalis* has a rufous tail, which also appears rather spikier, whilst Spix's Spinetail *S. spixi* has an entirely rufous cap (including the forecrown) and a more solidly black lower throat. Although no vocalisations were heard which could be directly attributed to the pair of *S. hypospodia*, GMK is very familiar with the voices of both potential confusion species, neither of which were heard at this site during the *c.*45-minute observation period. This observation extends the species' range by *c.*250 km to the south of the São Francisco Valley.

GREATER THORNBIRD *Phacellodomus ruber*

Not mapped south of the São Francisco Valley in Minas Gerais by Remsen (2003), but we are aware of the following localities for the species: Uberlândia (DZUFMG 798–800), Uberaba (tape-recordings in 2002), Fazenda Jacaré-Riachão (DZUFMG 4232, 4403), and Sítio Recanto (DZUFMG 3532, MHNT 4554). A record from the Lavras region, in southern Minas Gerais (Vasconcelos *et al.* 2002a) has subsequently been withdrawn (Vasconcelos & D'Angelo Neto 2005). However, on 24 August 2004, GMK *et al.* found a pair of this species collecting nesting material in gallery woodland close to a marsh near Cristiano Otoni (for coordinates see previous species), c.100 km south of Belo Horizonte, thereby suggesting that the species does, at least locally, reach the southern half of the state.

POINT-TAILED PALMCREEPER *Berlepschia rikeri*

This furnariid is restricted to *veredas* and other palm groves, especially those with *Mauritia flexuosa*. It ranges from Venezuela and Colombia south to Bolivia and north-central Brazil (Ridgely & Tudor 1994, Sick 1997, Remsen 2003). The southernmost published record appears to be from the Estação Ecológica de Águas Emendadas, Distrito Federal (Bagno 1998, Bagno & Marinho-Filho 2001). On June 1993, MGD observed one foraging in a *Mauritia* palm at a *vereda* in Fazenda Bom Sucesso. This is the first record of the species in Minas Gerais (Mattos *et al.* 1993), a range extension of c.170 km, and the southernmost known record.

RUSSET-MANTLED FOLIAGE-GLEANER *Syndactyla dimidiata*

This *Cerrado* endemic (Silva 1995, Silva & Vielliard 2000) is distributed in central Brazil and north-east Paraguay (Ridgely & Tudor 1994, Remsen 2003). There are apparently no published records from the east bank of the rio São Francisco (Ridgely & Tudor 1994, Remsen 2003). Robbins & Zimmer (2005) provided a relatively complete list of specimen localities. On 8 October 1996, one was observed by SDN foraging in the understorey of a gallery forest at Chapada do Catuni. On 9 July 2000, a pair was observed foraging with a mixed-species flock in the mid strata of a gallery forest at Santa Marta. Further, on 21 May 2004, MRB, SDN, MFV and R. B. Lopes observed and tape-recorded one in semi-deciduous forest at Mendanha. These records demonstrate that the eastern boundaries of the species' range are not confined by the west bank of the rio São Francisco, or by the west slope of the Espinhaço range. We follow Robbins & Zimmer (2005) in transferring this species to *Syndactyla* from *Philydor*.

GREAT XENOPS *Megaxenops paraguayae*

One responding to playback at the ecotone between low *caatinga* woodland and wooded *cerrado*, c.15 km west of Lagoa dos Patos, on 11 August 2005 (GMK *et al.*). Previously considered largely endemic to the *Caatinga* (e.g. Ridgely & Tudor 1994), this species has since been found at a number of localities within the *Cerrado* region, e.g. at Paracatu and Buritis (both in Minas Gerais), and at Brasília (Distrito

Federal). *Megaxenops* appears far from rare in northern parts of Minas Gerais with suitable habitat, and we have it found reasonably common even in heavily degraded and disturbed *caatingas*, e.g. beside main roads, as well as, unsurprisingly, in extensive areas of suitable habitat, such as on the east bank of the rio São Francisco between Mocaminho and Espinhaço, on the north-west flank of the Serra do Espinhaço. Given its former status as 'rare' (Ridgely & Tudor 1994) and ongoing deforestation within the *Caatinga* (cf. *O Globo Revista*, 19 September 2004), the species' presence within the recently declared Parque Nacional Cavernas do Peruaçu, one of the relatively few protected areas known to harbour the species, is noteworthy (Remsen 2003).

STRIPE-NECKED TODY-TYRANT *Hemitriccus striaticollis*

Poorly known in Minas Gerais, where principally recorded in the São Francisco Valley (Kirwan *et al.* 2001, 2004), although not mapped for this region by Clock (2004). Recently discovered by GMK *et al.* in low-stature (*c.*6-m tall) dry forest along creeks north of São José de Almeida (18°40'S, 43°59'W), north-east of Belo Horizonte, in late-August and late-October 2004, a range extension of *c.*230 km southwards. In our experience, this species often appears to be found in close proximity to watercourses, but not specifically in gallery woodland, merely in woodland through which small creeks or even broader rivers may be running. This association does not appear to have been mentioned in the mainstream literature (e.g. Ridgely & Tudor 1994, Clock 2004).

CHAPADA FLYCATCHER *Suiriri islerorum*

Recently described and virtually endemic to Brazil (Zimmer *et al.* 2001), available knowledge was summarised by Robbins (2004) and subsequently augmented by Lopes (2005) and Lopes & Marini (2005), who in particular drew attention to some previously overlooked museum specimens, including two from Minas Gerais, taken by H. F. Berla at Lagoa Santa, just north of Belo Horizonte. There are additional specimens of *islerorum* from the same locality that have not previously been mentioned in the literature, namely the following in the Zoological Museum, University of Copenhagen (ZMUC): a female in worn plumage taken 8 November 1835 by P. W. Lund (ZMUC 80261), a male in fresh plumage collected 11 March 1836 by P. W. Lund (ZMUC 80264), and a female in The Natural History Museum (NHM; Tring) taken on 13 July 1847 (NHM 1888.1.13.639). There is also another male in worn plumage (ZMUC 80263), from Paracatu, Minas Gerais (17°13'S, 46°52'W), on the rio Paracatu, near the border with Goiás, taken on 6 September 1834, again by P. W. Lund, who also seems to have collected a male *Suiriri affinis* at the same locality on the same day (ZMUC 80262), making this one of the few known localities where these two species apparently occur in sympatry. During field work in the Lagoa Santa region (town centred on 19°38'S, 43°53'W) in late-August 2004, GMK relocated *S. islerorum* by virtue of its distinctive dawn song accompanied by wing-lifting display, in rather modified *cerrado* a few kilometres

north-east of the same town, confirming the species' continued presence in the state, which thus marks the easternmost extremity of its range. There is much suitable, wooded *cerrado* habitat for both *S. islerorum* and *S. affinis* (which is also present in this region), from approximately immediately west of Lagoa Santa town, at the junction of the MG-424 and MG-010 to c.5 km north-east of São José de Almeida, along the MG-010, and, although infrastructural development, particularly residential construction (including second homes and holiday accommodation), in the area continues moderately apace, away from roads both species are probably still common. Additional, recently discovered, localities for the species in Minas Gerais, are Fazenda São Bento, west of Patís (town centred on 16°07'S, 44°08'W), and lightly wooded *cerrado* west of Lagoa dos Patos (16°97'S, 44°57'W). At the second-named locality *Suiriri affinis* is also present and the two species seem to frequently occur side-by-side, at least in late winter (August–September) (GMK pers. obs.). However, relatively nearby, south of Pirapora, we have only encountered *S. affinis*. Nonetheless, we suspect *S. islerorum* is a common constituent of the better-wooded *cerrados* of northern Minas Gerais.

RUFOUS-SIDED PYGMY-TYRANT *Euscarthmus rufomarginatus*

Recently discovered at Chapada do Catuni (D'Angelo Neto & Queiroz 2001), the species is rare in scientific collections. On 28 May 2003 a male (DZUFMG 3820) was tape-recorded and collected by MFV and SDN in *cerrado* at Sítio Recanto, near Chapada do Catuni.

MINAS GERAIS TYRANULET *Phylloscartes roquettei*

This globally threatened species (BirdLife International 2000, 2004) is known from a handful of recent localities in northern Minas Gerais (Kirwan *et al.* 2001, 2004, Raposo *et al.* 2002, Fitzpatrick 2004). A previously unpublished record belongs to J. F. Pacheco, who with R. Ribon, observed and tape-recorded *P. roquettei* at the Projeto Jaíba, Mocambinho (c.15°05'S, 44°00'W), on 18 September 1996. The recording has been confirmed as belonging to this species by R. Parrini and B. M. Whitney. Mocambinho becomes the northernmost locality known to date, and raises the possibility that the species might be located in contiguous, similar suitable habitat in south-west Bahia. More recently, on 25 July 2000, three were observed by SDN foraging in the canopy of a dry forest on a limestone outcrop at Sítio Duboca. On 15 August 2000 and 21 April 2005, more were observed and tape-recorded by SDN at the same site. This is the sixth known locality for *P. roquettei*. It might also be remarked that the regular territory south of Pirapora, centred on the Córrego dos Ovos (see Raposo *et al.* 2002), continues to be occupied and, on 4 September 2005, the pair had a partially built nest, constructed on perhaps the same branch as that in October 2002 (Kirwan *et al.* 2004), close to a prominent termitarium and also in near proximity to a nest under construction of Yellow-breasted Flycatcher *Tolmomyias flaviventris*, suggesting strong nest-site fidelity, although it might also be remarked that suitable habitat for *P. roquettei* is rather limited in this area.

CAATINGA BLACK-TYRANT *Knipolegus franciscanus*

Though not generally regarded as a species (Ridgely & Tudor 1994, Scholes 2004), *franciscanus* is an interesting, highly disjunct and poorly known taxon. Available information on its life history traits are extremely few and, indeed, are not often specifically elucidated given the decision of many commentators to maintain *franciscanus* as a form of *K. aterrimus*, prompting us to comment on its winter behaviour and feeding strategies here, based on observations by GMK in August–September 2005. At this season, in contrast to the austral summer, *franciscanus* seems much less tied to limestone rocky outcrops, being sometimes found many kilometres from such microhabitat. In winter, male *franciscanus* is a regular component of canopy and mid-level flocks which typically also include Olivaceous Woodcreeper *Sittasomus griseicapillus reiseri*, Wagler's Woodcreeper *Lepidocolaptes wagleri*, Streaked Xenops *Xenops rutilans*, Yellow-breasted Flycatcher *Tolmomyias flaviventris*, Ash-throated Casiornis *Casiornis fuscus*, Tropical Gnatcatcher *Polioptila plumbea*, Rufous-browed Peppershrike *Cyclarhis gujanensis*, Chestnut-vented Conebill *Conirostrum speciosum*, Hooded Tanager *Nemosia pileata* and, more occasionally, Reiser's Tyrannulet *Phyllomyias reiseri* (e.g. at Fazenda Nossa Senhora de Aparecida, Itacarambi). Females, in contrast, are apparently much more solitary and were never found within mixed-species flocks at this season, and were usually noted within 2 m of the ground, rather than in the crown of canopy trees. They perched quietly in the lower branches or undergrowth of dry forests or second-growth *caatingas*, hunting from more concealed perches, 1.0–2.5 m up (males were typically very bold and obvious at this season, sallying from exposed, high perches). Females were also more frequently noted away from tall semi-deciduous forest than males, and even descending to the ground to take unidentified insect prey. Both sexes performed sally-gleans usually to bark surfaces, but also to leaves, although there were relatively few leaves on the trees at this season.

RUFIOUS CASIORNIS *Casiornis rufus* /**ASH-THROATED CASIORNIS** *C. fuscus*

Snow (1973) opined that *Casiornis fuscus* might prove conspecific with *C. rufus* (speculation thereafter repeated by most subsequent commentators on this genus) based on the availability of 'intermediates', although the provenance or whereabouts of such specimens with mixed characters was not stated. Unfortunately, D. W. Snow (*in litt.* 2005) reports that his notes from this period are now lost, but recalls that he examined specimens in Rio de Janeiro, São Paulo, Belém, New York, Cornell, Washington and Philadelphia at this time. Snow (1973) also pointed to the largely allopatric ranges of *C. fuscus* and *rufus*, but subsequent field work has demonstrated the two to be slightly more widely sympatric, but probably largely syntopic at least when breeding, than previously known (see below). Various characters are useful in separating typical individuals of *C. fuscus* from *C. rufus*, amongst them the browner back, greyer upper breast and slightly

yellower belly of the former (Farnsworth & Langham 2004), and, as noted by Ridgely & Tudor (1994), the dusky wings, broadly fringed rufous to buff, of *fuscus*, a feature which in our experience is especially noticeable on the tertials. However, in early-August 2005, GMK encountered at least two *C. rufus* at the rio das Velhas, south of Pirapora, which displayed a tertial pattern inclining to that of *fuscus*, but in all other respects were morphologically classic of *rufus*. Furthermore, these individuals, like the several other, obvious examples of *rufus* present at the same site (where it seems to be a breeding resident, somewhat north-east of the range mapped by Ridgely & Tudor 1994 and Farnsworth & Langham 2004), all perched lower than 2 m in the trees, whereas *fuscus* is, in our experience in this general region, restricted to much taller woodland where it typically perches in the mid storey to canopy, not in the lower growth. (In other areas, e.g. in north-east Amazonia during the non-breeding season, such distinctions in foraging height and habitat use may not be consistent.)

The Museu Nacional do Rio de Janeiro has 17 specimens of *fuscus* (of which three are males, nine females and the rest unsexed) from Maranhão (3), Ceará (2), Pernambuco (1), Bahia (1), Goiás (2), Minas Gerais (2) and Mato Grosso (3, all from Jacaré, on the upper rio Xingu, in June–August), as well as 19 *rufus* (11 males, four females, the others unsexed) from Mato Grosso (9), Minas Gerais (1) and Goiás (7). (Two *rufus* and three *fuscus* lack locality data.) Two *rufus*, e.g. a male from Planaltino, Goiás (MNRJ 6013), taken in June, show slight dark tertial centres (especially the innermost) but are, in all other respects, ‘normal’, and the level of contrast in the tertial pattern is far less striking than in any *fuscus* held in the same collection. The same is true of seven specimens (of a total of 44 *rufus*) with some dark on the tertials in the Field Museum of Natural History (FMNH), Chicago, none of which is from any potential zone of overlap. Whether such individuals might be considered ‘intermediates’ demands further investigation (though we have never found *C. fuscus* at the site south of Pirapora), as it seems highly possible that such birds merely represent an extreme of individual variation or a previously undescribed, presumably age- rather than sex-related, plumage of *rufus*, although it should be added that most species at Pirapora were patently not breeding at this season. Furthermore, between 21 September and 1 October 1993, José Maria Cardoso da Silva, Dionísio Pimentel Neto and J. Ribeiro collected both species of *Casiornis* at Fazenda Cipasa (13°35’S, 46°49’W), São Domingos, Goiás state, in central Brazil. These specimens are housed at Museu Paraense Emílio Goeldi (MPEG), in Belém, Pará, and comprise three *C. fuscus* (MPEG 51193–51195) and five *C. rufus* (MPEG 51196–51200). MFV compared this material with specimens from other regions already housed at the MPEG, but found no evidence of mixed characters in the plumage of the two species. There are 14 specimens of *rufus* in the Natural History Museum (Tring), all from Argentina, Paraguay and Brazil (labelled Mato Grosso and Goiás), but none of these shows any evidence of intergradation. This is also true of the 13 specimens of *rufus*, from Argentina, Brazil and Paraguay, in the National Museum of Natural History (NMNH), Washington DC. Luís Fábio

Silveira (*in litt.* 2006) confirms that none of those specimens held at MZUSP can be considered 'intermediate'. We have not examined *Casiornis* material at any of the museums in the USA visited by Snow, but as Ridgely & Tudor (1994) and subsequent North American authors have found no evidence of such intergradation, it seems reasonable to assume that no birds with mixed characters are present in the four USA institutions mentioned above.

In addition to our noting (above) that Rufous *Casiornis* is present in the lower São Francisco Valley in the breeding season, outside the usually mapped range, it seems worthwhile to clarify some other statements that have entered the more popular literature. In January 1999, MFV and José Maria Cardoso da Silva collected *Casiornis rufus* in the savannas of Monte Alegre, Pará, in northern Brazil, in which region it was also encountered by Sneath (1914) and also collected, at Lago Grande in August 1920, by W. Garbe (Pinto 1944). In Ridgely & Tudor (1994), the only known site north of the Amazon is erroneously listed as 'Porto' Alegre, and in Farnsworth & Langham (2004) the map copies the former work but the text also lists *C. rufus* for 'S Amapá' (where it has been recorded once recently, at the interface between a gallery forest and cerrado, between Macapá and Porto Grande, on 12 February 1999; K. J. Zimmer *in litt.* 2006, Whittaker 2004). It should further be remarked that the presence of *C. rufus* in southern Pará in January suggests to us the presence of a breeding population well north of its currently ascribed range, rather than austral migrants, which these were 'relegated' by Ridgely & Tudor (1994) and Farnsworth & Langham (2004). During a brief visit to the *lavrados* (see Silveira *et al.* 2005) of Monte Alegre, in December 2005, GMK failed to locate *C. rufus* but noted that the vast majority of Tyrannidae encountered in this region were breeding (either in courtship or nest building) at this time. Bolivian specimens of *rufus* in FMNH included males with enlarged testes and females that had recently laid in late November and early December; Scholes (2004) states that breeding dates are unpublished.

Virtually nothing is known concerning the diet and feeding behaviour of *Casiornis fuscus*, beyond that it 'probably sallies for insects' (Farnsworth & Langham 2004). In the austral winter of 2005, GMK made a number of observations concerning food and feeding at several localities in the middle reaches of the São Francisco Valley. At this and sometimes other seasons, *C. fuscus* regularly associates with relatively small (in terms of number of individual birds) mixed-species flocks (the composition of which is described under *Knipolegus franciscanus*). Typically, the species spends some time slowly and methodically scanning its surroundings from a high perch, before making a short upward sally-glean to a bark surface, then a 1.0–1.5-m flight to the next perch, which is usually at the same height or slightly lower than that that initially utilised. It usually proved impossible to identify prey items, but once a c.4-cm caterpillar was taken, swallowed whole after being beaten c.10 times against the bird's perch. Stomach contents for eight *C. fuscus* in MNRJ are thus: solely insects (6), insects and small fruits (1) and solely small fruits (1). The diet and feeding behaviour of *C. rufus* is also very poorly known (Farnsworth &

Langham 2004); we have only observed this species to feed on flying insects, caught during short sallies from low perches, sometimes very close to the ground and in a manner generally not dissimilar to a *Myiarchus* flycatcher. K. J. Zimmer (*in litt.* 2006) records that, in his experience, *C. rufus* forages from 1 m above the ground to the canopy. In the Pantanal, the species is regularly encountered with mixed-species flocks of insectivores in the understorey of gallery forest, particularly during the middle hours of the day, when it is usually within 3 m of the ground. However, in the early morning, it is regularly found in the canopy and subcanopy, and at forest edges (which latter is also our experience in northern Minas Gerais). At Alta Floresta, where the species seems to occur only in semi-deciduous forest growing in poor soils atop some of the small *serras*, it regularly forages to heights of 10 m+. He agrees that, on average, *C. fuscus* forages higher (probably seldom lower than 5 m above ground), but Zimmer considers *C. rufus* to be more flexible, even adjusting its behaviour during the course of the day as described above. Stomach content data are also available for ten MNRJ specimens as follows: only insects (8), small fruits and insects (1) and fruits and insects (1). Weights of the FMNH specimens of *rufus* vary from 20.2g to 25g, the former lighter than the lower limit given by Scholes (2004)

PURPLE MARTIN *Progne subis*

Although mapped as wintering over a rather extensive area of south-central Brazil by Turner (2004), specific localities for both wintering birds and migrants appear, in fact, to be rather few (Paynter 1995, Sick 1997). The dangers of 'over-mapping' the ranges of Nearctic migrants wintering in the Neotropics were ably demonstrated by Remsen (2001); see also Sand Martin *Riparia riparia* and Cliff Swallow *Petrochelidon pyrrhonota*. GMK encountered an adult male over a residential area near Vespasiano (19°40'S, 43°55'W), just north of Belo Horizonte, on 28 October 2004. On 4 September 2005, two moulting adult males were observed feeding over the rio das Velhas, south of Pirapora, on 6 September 2005, another two males were encountered over the rio São Francisco at Mocambinho (GMK, R. Schaefer; see description of this locality in Kirwan *et al.* 2001) and on 1 March 2006 a male was observed on active migration at the foot of the Serra do Cipó (GMK). Care was taken to separate these birds from the remotely possible Southern Martin *P. elegans*, which in males is much less bright purple-blue than the present species and has a longer and more deeply forked tail.

SAND MARTIN *Riparia riparia*

Mapped as wintering over a rather extensive area of South America by Turner (2004), but specific localities for both wintering birds and migrants in Brazil seem to be rather few (Paynter 1995 maps just 17 localities), and the species is generally rather scarce in the country, with the largest numbers recorded in the Manaus area, Amazonas (Stotz *et al.* 1992). In the south-east of the country, there seems to be rather few records for Rio de Janeiro (J. F. Pacheco *in litt.* 2006) and Willis & Oniki

(2003) map 13 localities for the species in São Paulo state. GMK observed one on active migration at the foot of the Serra do Cipó on 2 March 2006. There seem to be no previously published records for Minas Gerais, but the late N. Carnevalli reported to MFV that he had observed the species in the Triângulo Mineiro, in the west of the state.

CLIFF SWALLOW *Petrochelidon pyrrhonota*

Mapped as wintering over a large area of south-central South America east of the Andes by Turner (2004), but specific localities are relatively few and generally almost entirely within the southern third of the region designated by Turner as the species' winter quarters (Paynter 1995, Sick 1997; see comments concerning such 'over-mapping' under Purple Martin). GMK has observed the species in the Serra da Canastra National Park and adjacent areas on several occasions: *c.*5 feeding over the plateau grasslands close to the source of the rio São Francisco, on 29 September 2002; a large south-eastwards passage involving many hundreds, if not low thousands, of individuals on a broad front, over the grasslands of the plateau, in the late afternoon of 23 October 2004 (when most birds were moving within a few metres of the ground and did not pause to feed), with smaller numbers (<10) noted on both 22 and 24 October in the vicinity of São Roque de Minas, at the foot of the serra; *c.*250 feeding over grasslands in the park with many White-rumped Swallows *Tachycineta leucorrhoa*, Tawny-headed Swallows *Alopochelidon fucata*, Great Dusky Swifts *Cypseloides senex*, White-collared Swifts *Streptoprocne zonaris* and a handful of Barn Swallows *Hirundo rustica* on 12 October 2005; 30+ migrating high over the southern boundary of the park on 4 March 2006, and <10 the following day over the grasslands amongst large flocks of Blue-and-white Swallows *Notiochelidon cyanoleuca*. Despite a lack of previous records from the area (Silveira 1998, 1999), it seems that *P. pyrrhonota* might well be regular and abundant on passage through this region of the state, at least.

Further evidence of dramatic passage through central Brazil comes from Emas National Park, Goiás, where on 25–30 October 2005 K. J. Zimmer, A. Whittaker & B. Carlos recorded a large movement of Cliff Swallows, with a highest (conservative) count of over 2,000 birds on 25 October. The birds were not recorded earlier in the day, but large numbers became conspicuous during impending stormy weather late in the afternoon, when they foraged quite low over the grasslands. The usual pattern was for birds to be much more conspicuous and present in larger numbers late afternoon, although twice the observers noted 200–500 in the early mornings as well. On most occasions, the birds were exceptionally vocal.

GREY-HEADED TANAGER *Eucometis penicillata*

Known in Minas Gerais from 11 published localities, principally in the central-south of the state (Kirwan *et al.* 2004, Rodrigues & Gomes 2004). On 16 January 2004, MFV and JFS observed one in a gallery forest at Fazenda Jacaré-Riachão. MFV and D. Hoffmann tape-recorded and collected a pair (DZUFMG 4225–4226), on 15 July

2004, in the same area. On 2 October 2004, JFS observed two individuals in a gallery forest at Rio do Cedro. On 26 October 2004 and 4 September 2005, GMK and R. Schaefer found the species alongside the rio das Velhas, south of Pirapora, in dry, rather open woodland beside the river (for a description of this locality see Kirwan *et al.* 2004). On the second date, at least one Grey-headed Tanager was observed feeding on or close to the ground, on insects disturbed by ants, along with a variety of other bird species including Squirrel Cuckoo *Piaya cayana*, Rufous-tailed Jacamar *Galbula ruficauda*, Rusty-breasted Nunlet *Nonnula rubecula*, Pale-legged Hornero *Furnarius leucopus*, Henna-capped Foliage-gleaner *Hylocryptus rectirostris*, Great Antshrike *Taraba major*, Fuscous Flycatcher *Cnemotriccus fuscatus*, and four species of *Turdus*. These records mark new sites for this widespread species in the northern half of the state.

CHESTNUT-HEADED TANAGER *Pyrrhocomma ruficeps*

A pair was observed for c.10 minutes at close quarters, briefly responding to playback and feeding in the bamboo and other understorey of gallery woodland below the Casca D'Anta waterfall, just within the Serra da Canastra National Park, on 13 August 2005 (GMK *et al.*). The same observer searched the same area for the species, using playback, on 12 October 2005 and 5 March 2006, but was unsuccessful. The status of the species in the park thus remains to be confirmed (whether resident, winter visitor or vagrant), but this is the first record for this locality (Silveira 1998), which marks the northern limit for many Atlantic Forest taxa, and perhaps the northernmost ever (Isler & Isler 1987) for this generally rather uncommon species which seems particularly rare and infrequently recorded in the northern half of its range.

LESSER GRASS-FINCH *Emberizoides ypiranganus*

This cryptic species is distributed in marshy areas through south-east Brazil (in São Paulo to Rio Grande do Sul), and adjacent areas of Argentina and Paraguay (Eisenmann & Short 1982, Ridgely & Tudor 1989). Its northernmost limit appears to be the Campos do Jordão, in the Serra da Mantiqueira, São Paulo, based on a specimen taken by H. Lüderwaldt, on 15 November 1905 (MZUSP 5887). On 16 May 2004, two adult males (DZUFMG 4171–4172) were collected by MFV, MRB, and R. B. Lopes at Chapada, Parque Estadual do Rio Preto (elevation 1,650 m). Both were attracted to playback of a recording of the species on Vielliard (1995). They were in marshy areas near streams, foraging within bushes of *Chusquea nutans* (Poaceae), an endemic bamboo species to the Espinhaço range (Clark 1992). One responded to playback and was tape-recorded. This is the first record of Lesser Grass-finch in Minas Gerais (see Mattos *et al.* 1993), extending the species' range c.520 km to the north. The distributional pattern exhibited by *E. ypiranganus* is similar to that of other animals and plants that occur regularly at mid or low elevations in southern Brazil and adjacent areas (south of 23°30'S), but present a patchy distribution at higher altitudes in the mountains of south-east Brazil

(Simpson 1979, Silveira & Cure 1993, Safford 1999, Vasconcelos 2001), suggesting that they dispersed from an austral area to south-east Brazil during one or more glacial epochs. During interglacial periods, with warmer climates, some populations retracted south and others (in the north) were possibly 'trapped' in the mountains. Comparison of the new specimens with a photograph of the entire series of *E. ypiranganus* housed at MZUSP (including the type) failed to reveal any significant morphological variation between northern and southern birds. Further, vocalisations tape-recorded in the field were similar to those given by southern populations.

PALE-THROATED SERRA-FINCH *Embernagra longicauda*

A typical species of eastern Brazilian tablelands, found in the Espinhaço range, as well as the Serra da Mantiqueira, Serra do Caparaó and rio Doce Valley (Machado *et al.* 1998, Vasconcelos 2003, Vasconcelos *et al.* 2003b). On 13 August 2002 one was observed by SDN vocalising intensely within an area of *campo rupestre* at Serra do Cabral. Despite being considered a western portion of the Espinhaço range, the Serra do Cabral is isolated from the main range, and this appears to be the westernmost record of Pale-throated Serra-finch (see map in Vasconcelos *et al.* 2003b).

DARK-THROATED SEEDEATER *Sporophila ruficollis*

This migrant seedeater was recorded by Sick (1997) on islands in the rio São Francisco, in Pirapora municipality. On 13 November 2003, an adult male was observed foraging among grasses in the surroundings of the town of Francisco Sá. This sight record extends the known range of the species c.150 km to the east.

BLACK-BELLIED SEEDEATER *Sporophila melanogaster*

A male in heavily worn plumage was encountered in Serra da Canastra National Park, on 5 March 2006 (GMK). Sick (1997) mentioned the species for only three localities in Minas Gerais, but the species has also been recorded in the national park before (Silveira 1998), on two occasions in October (L. F. Silveira pers. comm. 2006). At first sight, a March date might seem surprising in this area, as the species is endemic as a breeder to northern Rio Grande do Sul and southern Santa Catarina (Ridgely & Tudor 1989), and in the former state is present from at least 2 December until 9 March (Belton 1985, although GMK has records from there as late as 12 March); however, there is a February record from the Distrito Federal (Sick 1997), indicating that some return to the non-breeding grounds rather early, perhaps due to breeding failure. The present observation and those of Silveira (1998) are the first for the species from within a protected area in Minas Gerais (Brandt 1998).

SÃO FRANCISCO SPARROW *Arremon franciscanus*

This recently described species (Raposo 1997) has since been found in new localities at Bahia and northern Minas Gerais (Parrini *et al.* 1999, Kirwan *et al.* 2001, 2004, D'Angelo Neto & Vasconcelos 2003). On 10 October 2003 a male was

collected by MFV, SDN and JFS within second-growth *caatinga* in the surroundings of Francisco Sá (MZUSP 76180). This is the eighth available specimen of *A. franciscanus*, and represents the southernmost record of the species (D'Angelo Neto & Vasconcelos 2003, Kirwan *et al.* 2004).

WHITE-STRIPED WARBLER *Basileuterus leucophrys*

This *Cerrado* endemic (Silva 1995, Silva & Vielliard 2000) is known from western Bahia and Minas Gerais to interior Brazil (Ridgely & Tudor 1989, Sick 1997). All published records are from the left bank of the rio São Francisco to the west. On 18 December 1999, GMK, J. Mazar Barnett and J. Minns found at least one of this species singing in tall semi-deciduous forest beside the BR-365 road between Pirapora and Guaicuí (17°12'S, 44°49'W), as well as several Golden-crowned Warblers *B. culicivorus*. A subsequent visit to the area, by GMK, on 26 October 2004, when the same forest was practically devoid of leafy foliage, failed to locate the species. On 18 June 2002, one was tape-recorded and observed by MGD, MFV and SDN in a damp forest at Fazenda Suçupara. On 13 August 2002, one was heard singing in a gallery forest at Serra do Cabral by SDN. Three pairs were also observed and heard by SDN in gallery forest at Ribeirão Congonhas, on 9 January 2005. Records from Ribeirão Congonhas are the first for the rio Jequitinhonha basin. Further, all of these records extend the species' range to the right bank of the rio São Francisco.

FORBES'S BLACKBIRD *Curaeus forbesi*

Four observed, both perched and in flight, at the border of Parque Nacional Cavernas do Peruaçu, on 7 September 2005, at the ecotone between tall semi-deciduous forest and cultivated fields (GMK, R. Schaefer). For a general description of this area see Kirwan *et al.* (2001). Care was taken to distinguish this rare (globally threatened) species from the much commoner Chopi Blackbird *Gnorimpsar chopi*, which was also observed in the same general area on the same day, using those characters listed in Jaramillo & Burke (1999). Their distinctive fluty flight calls, in comparison to the much duller sounding and less complex calls of *Gnorimpsar chopi*, were clearly heard but could not be tape-recorded. There are two previously published records, one of them unconfirmed, from the middle São Francisco Valley in northern Minas Gerais (Willis & Oniki 1991, Kirwan *et al.* 2004), of this globally threatened and generally rather poorly known species. Additionally, the *C. forbesi* was again recorded at Pirapora, in August 2003, by A. Whittaker & K. J. Zimmer (*in litt.* 2006). Elsewhere, in the centre-east of the state, south of Ipatinga, the species is well known from the Parque Estadual do Rio Doce (c.19°30'S, 42°31'W). This discovery, just within the boundaries of the protected area and an Endemic Bird Area (Stattersfield *et al.* 1998), further underlines the conservation importance of this recently delimited national park to the conservation of birds in the *Caatinga* and the imperilled tropical semi-deciduous forests of the São Francisco Valley.

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Mitochondrial DNA sequences support species status for the Indian Spotted Eagle *Aquila hastata*

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The taxonomic status of the Indian Spotted Eagle *Aquila (pomarina) hastata* has been an issue of dispute. Originally described as a species, *Morphnus hastatus* Lesson, 1834, it was subsequently considered a subspecies of Lesser Spotted Eagle *A. pomarina* C. L. Brehm, 1831. Nominate *A. p. pomarina* breeds mainly in eastern and central Europe, and in the Middle East, and is entirely migratory, whilst *A. (p.) hastata* is a sedentary form restricted to India. The breeding ranges of the two are separated by thousands of kilometres, preventing any study of the reproductive barrier between them, the most important difference according to the Biological Species Concept. Parry *et al.* (2002) found a number of morphological differences between the two taxa, which led them to propose specific status for *A. (p.) hastata*. The most striking difference noted was in gape width, smallest in *A. p. pomarina*,